R2

The R2 HPC Cluster is a Linux core operating system (CentOS release 7), high availability cluster supporting 27 compute nodes, each with dual Intel Xeon E5-2680 14 core CPUs, for a total of 756 CPU cores. It has five GPU nodes with dual Nvidia Tesla NVLink P100 cards, and each GPU has 3584 cores with Double-Precision Performance of up to 4.7 teraflops – for a total of 35840 cores. Compute cores are controlled by the Slurm scheduler. R2's users have access to 30TB of direct attached NFS storage.

Hardware

36,456 processor cores	CPU: 2.4GHz Dual Intel Xeon E5-2680 v4 (14 cores each) GPU: Dual Nvidia Tesla NVLink P100's (3,584 cores each)
22 computation nodes	2.4-GHz dual intel Xeon E5-2680 v4 14 core
5 GPU nodes	Dual Nvidia Tesla NVLink P100's (3,584 cores each)
5.5 TB total system memory	192 GB on 22 nodes, DDR4-2400 256 GB on 5 nodes, DDR4-2400
Mellanox ConnectX-3 VPI InfiniBand high-speed interconnect	Bandwidth: 56 GBps bidirectional per link Latency: MPI ping-pong < 1 µs